

Applicant Name	Sunset Irrigation District
Project Name	Gravity Flow Group Irrigation Pipelines

Project Abstract

The purpose of the Renewable Resources Grant and Loan Program (RRGL) is to enhance Montana's renewable resources. Water is a vital renewable resource for all of Montana, and the aim of this project is to modernize an existing flood irrigation system on Sunset Bench near Stevensville to a water and energy-efficient gravity flow sprinkler system. Currently, the water distribution system is a flood irrigation system with flows diverted from Burnt Fork Creek onto Sunset Bench near Stevensville. In addition, Sunset Irrigation District owns Burnt Fork Reservoir and releases additional water for irrigation late in the summer. About 40% of the lands irrigated have converted to sprinkler systems and are using electricity to pump water for the sprinklers out of the two main ditches (Highline and Baker Ditches, which are about 15 miles long). The water delivery system will be modernized by changing to a gravity flow sprinkler system on the lands served in the Sunset Irrigation District boundaries. This change will have many incidental enhancements to many other important renewable resources.

The primary project goal is to eliminate dependence on electricity to pump water to existing sprinklers and to allow the remaining lands in the district to convert to sprinklers without depending on electricity to pump water. This conversion will increase irrigation efficiency and agricultural crop production and profits; it will also eliminate energy costs which are expected to rise dramatically when current electric rate contracts expire with the Ravalli County Electric Cooperative, Inc., in 2011. Less natural flow water will need to be diverted from Burnt Fork Creek to irrigate, and storage water from Burnt Fork Reservoir will be released in different amounts and at different or additional times than currently.

This design and construction project proposes to:

- Place Highline Ditch, currently an open ditch, in a pipe to increase the pressure of the water diverted from the headgate on Burnt Fork Creek;
- Eliminate Baker Diversion and replace the existing 36-inch steel pipeline with a 36-inch polyvinyl chloride (PVC) pipeline that can convey all the flow required by both ditch systems;
- At the outlet of the 36-inch PVC pipeline, 3,200 feet of PVC pipe will drop down to Baker Ditch in the east one-half of Section 10 and continue to utilize Baker Ditch as an open ditch; and
- Place a 30-inch PVC pipe continuing west for 1.8 miles to convey irrigation water for Highline Ditch system acres.

Additional benefits that improvements to the water distribution system on the Sunset Irrigation District lands will have on other renewable resources include:

- Stabilize streamflows in Burnt Fork Creek, protecting water quality, controlling streambank erosion, and improving riparian areas for wildlife and forage;
- Enhance sustainable fisheries in Burnt Fork Creek;
- Hydrologically reconnect portions of Burnt Fork Creek;
- Maintain a productive agricultural base of irrigated pasture and hay land;
- Preserve open space and green areas in the Bitterroot Valley represented by productive grazing lands and hay fields; and
- Create a water source available for the future needs of the Stevensville area and/or Burnt Fork watershed.